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PROCEDURES FOR ESTABLISHING A CONTINGENCY MANAGED CLASSROOM.
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This manual for classroom teachers is designed to teach the application of contingency contracting procedures in the typical instructional setting. A 'contingency contract' is an agreement between teacher and student whereby the student, upon demonstration of specific task achievement, receives a reward permission to participate in a 'reinforcing event,' some specified, highly desirable activity. A 'contingency-managed classroom' is an individualized instructional setting in which such systematic motivation management techniques as contingency contracting are employed. Chapter I (6 pages) lists the rules and principles of contingency contracting. Chapter II (6 pages) deals with the preparation and correlation of task materials and diagnostic test materials. Suggestions for the arrangement of classroom facilities to include a task area and a reinforcing event area are given in Chapter III (8 pages) along with a list of suggested reinforcing events for various age groups. Classroom management procedures such as orientation methods, specification of task assignments, and student self-contracting are discussed in Chapter IV (13 pages). Chapter V (1 page) deals with correction of contract malfunctions such as failure and discipline problems. Various procedures are illustrated with the use of 12 tables and flow charts. (JS)

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PROCEDURES FOR ESTABLISHING A CONTINGENCY MANAGED CLASSROOM

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TABLE OF CONTENTS

	Page
INTRODUCTION	v
I. RULES AND PRINCIPLES OF CONTINGENCY CONTRACTING	1
A. Introduction	1
B. Reinforcing Events	2
C. Rules of Contracting	3
1. Ten Rules of Contingency Contracting	3
2. Payoff for the Parent or Teacher	6
II. PREPARATION OF MATERIALS	7
A. Preparation of Task Materials	7
1. Identification of Subject Areas	7
2. Division of the Subject Area into Daily Task Units	8
3. Collection of Materials for Subject Area(s)	8
4. Assignment of Materials into Daily Tasks	9
B. Preparation of Diagnostic Test Materials	9
1. Identifying Existing Diagnostic Test Materials	10
2. Preparation of Diagnostic Test Items	11
C. Correlation of Task Materials and Test Materials	12
III. PREPARATION OF LAYOUT	12
A. Reinforcing Events (REs) and Reinforcing Event Area	12
B. Specification of Amount of Time Spent in RE Area	15
C. Methods of Controlling Time Spent in RE Area	15
D. Preparation of a Reinforcing Event Area	16
E. Preparation of a Task Area	17
F. Organization of Materials	17

Page

IV. MANAGEMENT OF THE CLASSROOM 21

A. Orientation Methods 21

1. Orientation Methods 21

2. Orientation Procedures 21

B. Prescriptive Procedures 22

1. Administration of Prescriptive Test and Additional Information 22

2. Identification of Problem Areas 24

3. Recording Diagnostic Information 25

C. Specification of Assignments 25

1. Identification of Diagnostic Level 25

2. Identification of Corresponding Task Materials 26

3. Preparation of Individual Task List 26

D. Establishing Daily Contracts 26

1. Setting Up the Contract Situation 27

2. Establishment of the Contract 27

3. The Implicit Definition of the Contract 28

4. Introduction of Preferred Tasks 28

E. Self-Contracting 29

1. Manager-Controlled, Student-Controlled, and Transitional Contracts 30

2. Implementation of the Transition 34

V. CORRECTING CONTRACT MALFUNCTIONS 35

A. Recognizing Malfunctions 35

B. Methods of Remedying Malfunctions: Revising the Contract 36

1. Lengthening the Contract 36

2. Shortening the Contract 36

Page

VI. CONCLUSION 36

APPENDIX

Student Record Sheet 39

Task, Material, and Diagnostic Test Specification Flowchart 40

RE Specifications Flowchart 42

Specification of Classroom Layout Flowchart 43

Orientation to Contingency Managed Classroom Flowchart 44

Diagnostics and Prescriptions Flowchart 45

Specification of Contracting Flowchart 46

LIST OF ILLUSTRATIONS

How to Use the RE Menu 18

RE Menu 19

How to Organize Materials 20

Information Form 23

Levels 1-3 Contracting Steps 32

Levels 4-5 Contracting Steps 33

INTRODUCTION

PROCEDURES FOR ESTABLISHING A CONTINGENCY MANAGED CLASSROOM is a text designed to teach the application of contingency contracting procedures in the typical instructional setting. It has been prepared primarily for classroom teachers. The minimum prerequisite is a basic educational background of the average school teacher, regardless of his subject of specialization. The course assumes the reader is familiar with the basics of individual instruction and has a desire to employ systematic motivation management techniques in an individualized instructional setting.

The manual contains suggestions for analyzing the course curriculum to select self-instructional materials essential to the system.

Flowcharts and tables are provided. The tables serve as illustrative examples and tools of analysis for the teacher, and the flowcharts serve as instructional guides for those who have successfully completed the material. They are referenced to specific portions of the text for quick access.

I

RULES AND PRINCIPLES OF CONTINGENCY CONTRACTING

A. Introduction

One of the major problems educators and parents have faced through the ages has been that of motivating children to perform tasks of which the desirability was determined by these adults. Traditionally, negative contingencies have been favored to achieve this goal. The contract in such cases is "To avoid punishment, you must perform such and such a task."

This manual advocates the method of positive contingencies. The contract in this case is "As soon as you demonstrate that you have learned a little more, you may do something which is even more desirable."

Positive contingency contracts are used every day. When one goes shopping, takes a job, or hires an employe, positive contingency contracts are involved. Our everyday life is largely run by positive contracts. Wherever such contracts meet the criteria of fairness and honesty, they fill important needs for interpersonal relations. The purpose of this manual is to make explicit to those who work with people every day, especially those who work with children, the rules of contingency contracting.

The principles and rules of positive contingency contracts can be used for the management of relationships between teachers and the children. Although the majority of parents and educators have always used these rules, they have not been explicitly stated, nor have they been used consistently or systematically. This manual will specify these rules, show their relationship to sound principles of behavior science, and illustrate their applicability to the management of motivation in the school and in the home. The ultimate objective of behavior motivation technology is the shifting of motivation management techniques to self-

management techniques. This shift is treated in the last section of this manual.

The reason for bringing up the ultimate objectives at this time is to assure those teachers who may be dubious about the whole area of motivation management. They may be saying to themselves, "Students should be motivated by a desire to succeed, not by the promise of a reward," or "This sounds like bribery to me." Or the teacher may be thinking, "If I apply contingency contracting systematically now, won't the child grow up expecting rewards for every little thing he does?" Although the writers of this program had similar concerns in the past, experience has proved otherwise. Children who participate in a program of systematic contingency management turn out to be happy, eager-to-learn children for whom learning becomes a most rewarding experience.

B. Reinforcing Events

The terms of a contingency contract must offer as a reward an experience which is highly desirable and not obtainable outside the conditions of the contract. If the terms on the student's side of the contract lead to such experiences:

1. it will increase the probability that the students will perform the same activity in the future.
2. it will maintain in strength a behavior which is already strong.

This will be true as long as the terms of the contract hold and as long as the characteristics of desirability and attainability of the experience do not change. If the experience offered becomes less desirable, or if the same experience becomes attainable in other ways, the experience will lose its potential as a reinforcer. A reinforcer in psychology is an event which, when it follows certain activities, increases the likelihood that these activities will recur.

There are many kinds of reinforcers. Some reinforcers make it possible for an organism to engage in a desired activity. A person is likely to perform a relatively boring and uninteresting task if the payoff is the opportunity to do something more interesting and entertaining. For example, driving for miles through holiday traffic is not a rewarding task, but thousands do this to get to a place to perform some enjoyable activities, which otherwise would not be available to them. Generally, reinforcers are things the organism does or likes to do. Other reinforcers involve things that happen to the organism. The phrase, reinforcing event, is broad enough to include all possibilities.

C. Rules of Contracting

Rules of contracting are not entirely unknown to the average teacher or parent. In fact, much of the system of contingency contracting may be summed up in "Grandma's Law," which states: "First clean up your plate, then you may have your dessert."

1. Ten Rules of Contingency Contracting

The first five refer to the use of the reward in contracting, while the last five describe characteristics of proper contracting.

a. Rule 1. Reward immediately. This rule should be observed early in the game when the child is just learning about contracting. Initial contracts (Rule 2) should demand a small bit of behavior then a progress check to see whether the behavior was executed to the contractor's specifications. Then the reward should be offered immediately. It is important that the presentation of the reinforcer be contingent only on the adequate performance of the behavior and not on the passage of time.

b. Rule 2. Reward small approximations. If the initial performance requested from the student is a small, simple-to-perform approximation to the final performance desired, no difficulties will be encountered. But if the performance requested is too difficult for the student to perform, no amount of reward will help. In fact, the major thing wrong with contingency contracting in everyday situations is that the contingency manager does not settle for approximations. The contingency contract is likely to say, "Do all the arithmetic problems at the end of the chapter correctly, then you may watch a movie." The systematic motivation manager is more likely to say, "Do the first two problems correctly, then we will watch a movie for five minutes." When he is training a new employe, the employer always has to reward approximations. If the new employe were to be rewarded only for expert performance at the start, he would never obtain the offered reward and would more than likely void the contract by leaving the job.

c. Rule 3. Reward frequently with small amounts. Experience has shown that it is more effective to give frequent, small reinforcements than a few large ones. As Rule 2 indicates, this is important early in the game.

d. Rule 4. Reward accomplishment rather than obedience. Thus, the contract should say: "If you accomplish X, you will be rewarded with Y," not, "If you do what I tell you to do, I will reward you with X." Reward for accomplishment leads to independence. Reward for obedience leads only continued dependence on the person to whom the child learns to be obedient.

e. Rule 5. Reward the performance after it occurs. In contingency management the "first work, then play" sequence does not occur just once, twice, or three times a day, but a dozen times a day. The order of events is often reversed, leading to bad contracts. For example, "Just one more game of cards (a reinforcing activity), then you do your homework (a task event)." Or, "Stop watching television (a reinforcing event), and carry out this trash (a task event)." The examples illustrate that events do not automatically break down into small units and arrange themselves in the correct order. This manual demonstrates the correct method of managing contingencies.

f. Rule 6. Be fair. The terms of the contract found on the opposite sides of the agreement ("If you will do X, I will do Y."), must be of equal weight. A contract in which a teacher says to the student, "If you get all A's throughout the school year, I will take you to the movies," is unfair. On the other hand, if the teacher said, "If you sit quietly for two minutes, I will take you to the movies," this would also be an unbalanced contract. In general, the amount of reward must be equal to the amount of performance.

g. Rule 7. Be clear. The terms on either side of the agreement must be explicitly stated. An unclear contract would say, "Do a few arithmetic problems, and then we will do something more interesting." A clearly-stated contract would say, "Do 10 arithmetic problems correctly, and then we will watch the first four minutes of this Popeye cartoon." The child must always know how much performance is expected of him and what he can expect as a payoff.

h. Rule 8. Be honest. An honest contract is one which is carried out immediately and according to the terms specified in the contract.

i. Rule 9. Be positive. An appropriate contract should not say, "I will not do X, if you will do Y." The terms of the contract should contribute something to the child's experience rather than take something away from him. Contracts used in the school and in the home like "Behave as I tell you, " are negative.

j. Rule 10. Use Contracting systematically. The laws of contingency management work whether one pays any attention to them or not. These laws do not only apply during arithmetic period, the reading lesson, or school hours. A reinforcement following a bit of behavior will strengthen that behavior whether or not it occurs during school hours. As one becomes familiar with contingency management procedures, one might ask for almost every behavior requested of the child, "What is the payoff for the child?"

Once contracting has been established as a motivation-management procedure, it should be maintained, and care should be taken not to reward undesirable acts. Unwanted behaviors can be eliminated by never reinforcing them or by reinforcing behavior which is incompatible with the undesirable behavior.

2. Payoff for the Parent or Teacher

The parents and teachers find that children are eager to perform under these conditions. These children do not show the timid or aggressive signs of children performing under duress and coercion,

nor do they exhibit the demanding and spoiled characteristics of those who are used to receiving unearned benefits. There is a delight and joy in activities of children who have a feeling of willing and conscious accomplishment and well-deserved rewards. This is the greatest reward teachers or parents can experience.

II

PREPARATION OF MATERIALS

A. Preparation of Task Materials

To prepare the task materials for the contingency managed classroom, four steps are required:

. Identification of the subject areas

. Breakdown of the subject area objectives into daily task units

. Collection of materials for subject areas

. Assignment of materials into task units

1. Identification of Subject Areas

Identification of the curriculum or any portion of it is relatively easy at the high school level. There, each teacher deals basically with only one type of subject such as social studies, English, algebra, etc. At the kindergarten or elementary level, the teacher is likely to be teaching more than one subject. In either case, it is necessary to identify the year's curriculum in terms of detailed objectives.

This manual is not designed to teach a course in methods and material preparation in which the reader would learn the fundamentals of defining yearly objectives or the methods of preparing unit plans and daily lesson plans. If the reader is interested in these objectives,

an excellent guide is Robert Mager's book, Preparing Instructional Objectives*. Specification of the subject areas in terms of behavioral objectives has two significant consequences in the contingency management system. First, the teacher will be able to observe the progress of the student and be assured that he is satisfactorily acquiring the skills specified. Second, the teacher can identify and/or prepare diagnostic test items which can be scored and correlated with specific instructional materials.

2. Division of the Subject Area into Daily Task Units

Daily tasks are equivalent to the daily lesson plans prepared by the teacher and should be the basis for day-by-day individual task assignments for each student. The final daily tasks will assure a logical and consistent flow of the instructional sequence from one unit to the next. It is important that the daily task units be as short as possible so the student can complete them and receive the contracted reinforcement. In the typical 50-minute high school period the average student should successfully complete at least two task assignments and the equivalent number of reinforcing event periods.

3. Collection of Materials for Subject Area(s)

Once the subject area is identified as, for example, mathematics, reading, history, science, the next step is to determine what subject materials exist to cover these areas. The materials may be programed courses, audio-visual materials, workbooks, textbooks, ordinary library books, or oral communications. What is important is that materials should be evaluated to indicate high correlation between

*Mager, Robert, Preparing Instructional Objectives; Fearon Publishers, Inc., Palo Alto, California, 1962.

the objectives of the subject matter being taught and the content of the instructional materials. In addition, it would be helpful to have materials geared to several student levels within the same general subject area. For example, the subject area might be seventh grade reading. The teacher could have materials appropriate for students reading on fifth, sixth, seventh, eighth, etc., grade levels. At first it may be impossible for the teacher to get materials other than those specified by the state board, but if additional materials are needed, they can probably be requisitioned at specified times during the year.

4. Assignment of Materials into Daily Tasks

Once materials have been collected for a particular subject area, they should be analyzed and assigned to correspond to the daily task objectives. The teacher may prefer to do this before the school year begins or before introducing any new unit of instruction, or on a day-by-day basis. If the teacher chose to assign materials for task objectives before school began, he would choose materials fitting the subject, divide the materials by chapters, etc., corresponding to units within the subject, and finally assign specific pages as tasks within the unit.

B. Preparation of Diagnostic Test Materials

Diagnostic test materials fulfill two purposes. First, they are the only way a student's strengths and weaknesses can be determined objectively. Second, only by using diagnostic-type test items can the teacher be assured that a student has completed a particular task assignment and thus fulfilled his contingency contract.

Diagnostic tests, which fill the first of these functions, are used for preparing prescriptions for the correction of specific weaknesses and are called prescriptive tests. They should be given before any new unit of instruction is introduced. The second type of test is called a progress check and is designed to determine if the student has learned the information contained in a specific amount of material, in a lecture, or other type of presentation. If he can pass the progress check, he receives his reward. If not, remedial action must be taken to make sure that he can pass. The major difference between progress checks and prescriptive tests is that progress check items cover more minute details of the instructional subject. Diganostic test materials must be obtained either by identification of existing diagnostic test materials or by preparation of diagnostic test items where none exist.

1. Identifying Existing Diagnostic Test Materials

In some subject matter areas, diagnostic test materials of prescriptive value can be found in standardized form. Such materials are the Stanford Achievement Test, the California Achievement Test, and other similar tests.* Items on these tests are generally made to correspond to a specific level of instruction in several areas. For example, in the California Achievement Test, several levels may be identified for third grade reading. Such tests can be used then for placing the student at a particular achievement level and prescribing the tasks for the next achievement range for which specific items exist on the test. In addition to these standardized tests, self-instructional materials often contain valuable diagnostic test items. Most of these are the progress check type, which examine in detail

* Some fine tests (some still in the developmental stages) may be obtained from the Learning Research and Development Center, Univ. of Pittsburgh, or Research for Better Schools, Philadelphia, Pa.

the repertoire of the student regarding specific items in the material. If the teacher has already correlated materials with the instructional objectives, these tests will serve directly as progress checks for the specified tasks.

2. Preparation of Diagnostic Test Items

In areas where diagnostic test materials do not exist, or where it is not feasible to administer and grade standardized tests, the teacher will have to prepare diagnostic test items for prescriptive tests, for progress checks, or both. For prescriptive purposes, items should be prepared to cover the tasks specified for the entire year, and test items should be developed based on the materials assigned to each unit of instruction. The teacher could make up the final examination and administer it as a prescriptive test. Progress checks should be based on the daily task materials. For each item of the daily task list the teacher should prepare from two to five objective questions for progress checks. Ideally, progress checks should be written so students can grade their own or exchange papers with one another. In addition, unit tests should be administered to determine if the student has mastered the material and is ready to progress to a new level. If the student had been cheating, it is unlikely that he would pass a unit test. The unit test could be sample test items taken from several progress checks over the material covered. It could be administered as part of the prescriptive test, in which case the test would contain review items as well as items on materials to be covered in the next unit. If the reader had not had experience in constructing test items, he might refer to Dorothy Adkins Wood's book Test Construction.*

* Wood, Dorthy Adkins. Test Construction. Charles E. Merrill Books, Inc., Columbus, Ohio. 1961.

C. Correlation of Task Materials and Test Materials

Once both prescriptive and progress check items have been selected or prepared for diagnostic tests to correspond to the instructional materials specified, it is relatively simple to correlate scores on these diagnostic tests with specific portions of the instructional materials. Portions of the California Achievement Test, for example, may be assigned to specified units of instruction. The student, having taken a diagnostic test for prescriptive purposes, may pass the items corresponding to the first unit objectives but not the second and later ones. Thus, the materials corresponding to the second and later objectives would be his task assignments. Then, as he completes each of the daily task assignments for the appropriate unit, the student takes the progress check corresponding to the completed task.

III

PREPARATION OF LAYOUT

A. Reinforcing Events (REs) and Reinforcing Event Area

In the contingency managed classroom, the teacher should provide activities which students enjoy and which serve as reinforcers for students who have successfully completed their tasks. It is possible that the teacher may want to have the students bring REs from home. Also, the teacher should be able to identify "momentary REs" and make them contingent on a specific action of the student. Examples of "momentary REs" include going to get a drink, going to the locker, and erasing the blackboard. The student who asks if he might get a drink would be told to finish his task and then go.

An important criterion for choosing REs is whether the students can engage in them quietly or if they will cause noise. Most teachers will probably

prefer to choose REs that are quiet and that may not involve more than one student. Examples of relatively quiet REs corresponding to appropriate response levels as defined by average age norms include:

1. REs for 3- to 5-year-olds
    a. Being read to
    b. Looking at books
    c. Playing with crayons
    d. Painting
    e. Working puzzles
    f. Cutting and pasting
    g. Playing with clay
2. REs for 6- to 8-year-olds
    a. Reading stories
    b. Playing with cards
    c. Drawing
    d. Painting
    e. Playing with tinker toys
    f. Playing dominoes
    g. Working puzzles
3. REs for 9- to 11-year-olds
    a. Reading comics
    b. Reading science fiction, mystery stories, etc.
    c. Working puzzles
    d. Playing chess
    e. Playing checkers
    f. Drawing
    g. Painting

4. REs for 12- to 14-year-olds

   a. Playing chess

   b. Playing cards

   c. Writing letters

   d. Reading magazines, books, comics

   e. Playing dominoes

   f. Talking

   g. Playing Tic Tac Toe

5. REs for 15- to 16-year-olds

   a. Talking

   b. Playing Tic Tac Toe

   c. Playing chess

   d. Reading books, magazines, comics

   e. Working jigsaw puzzles

   f. Playing checkers

   g. Writing letters

Obviously there are many overlapping REs from one category to another. There are many other REs that could and should be included in a contingency managed classroom. The most important ones are REs which are directly related to the educational objectives, and these should have high priority on any RE menu. Examples are discussions in groups with the teacher, role-playing, viewing relevant motion pictures or cartoons, etc. After having determined the REs that are available to the students, the teacher should make a reinforcing event menu.*

The REs can be written or pictured on a large poster, bulletin board, or something similar. The menu should be placed adjacent to the RE area and

*Addison, R. A. and Homme, L. E., "The Reinforcing Event (R.E.) Menu"; NSPI Journal, Vol. I, 8-9, 1966.

made easily available to the students. To avoid a large cluster of students around the menu, the teacher might want to provide two menus and arrange for students from one-half of the class to use one and students from the other half to use the other.

Another problem which the teacher should control is a student's repeated selection of the same RE. The student becomes satiated with it after a while, and it becomes less reinforcing. To control this, the teacher should arrange to change items on the menu periodically and orient the students to the REs currently available.

B. Specification of Amount of Time Spent in Re Area

The teacher should establish a method for determining the amount of time the students are to spend in the RE area. Students should probably not spend more than 10 nor less than 3 minutes in the RE area. If more time is spent, the RE may lose its value as a reinforcer for completing tasks. If less than 3 minutes is allowed, the students don't have the opportunity to actually get involved in the RE before the time is up. The criterion for determining the amount of time can be established in several ways. The teacher could correlate the amount of time with the difficulty of the task, i.e., the more difficult the task the longer the amount of time the student can spend in the area. The teacher could determine the amount of time on a prespecified basis, i.e., RE time would always be 5 minutes. Another possibility would be to determine time on a varying schedule based on chance. This would probably result in the students' approximating the 5 minutes.

C. Methods of Controlling Time Spent in RE Area

In addition to determining the amount of time the students may spend in the RE area, the teacher should have some means of assuring that the students

are not spending more time than is allotted to them. Possible methods for controlling this factor are:

1. The use of sign-in/out sheets. Students would sign in, stating the time they begin, and sign out, stating the time they leave the area. The teacher could spot-check the sheets, and those students who have over-stayed their time would be sent back to the task area.
2. In some cases it might be possible to use time clocks or other timing devices. With time clocks, the buzzer would ring at the end of the allotted period. This system is best when there are few students in the class.
3. Students could be taught to leave the RE area each time the minute hand of the clock hits the figures 1, 2, 3, etc. This method is convenient since each time the minute hand hits a number, all the students would have to leave the RE area. It would cause the students to complete their tasks faster in order to have maximum time in the RE area.
4. Peer pressure can also be used. The students themselves will often remind others that time is up. When the teacher notices this occurring, he can send the overstaying student back to the task area. Students who consistently overstay can be controlled by being deprived of as much RE time as the overtime they already had or by being reminded that their time is used up for several days.

D. Preparation of a Reinforcing Event Area

The RE area is a place where the students engage in their REs. This area can be another room or an area separated from the task area in the same room. It is probably most effective to have students engage in REs in a separate area to control the amount of talking between the two groups.

If this is not possible, students can engage in individual, quiet ERs at their desks. In such a case the student has his individual ER menu. He also can be taught to signal that he is engaging in an ER by, for example, pinning a colored card to his clothes. In this manner, the teacher can easily determine when students are engaging in reinforcing activities.

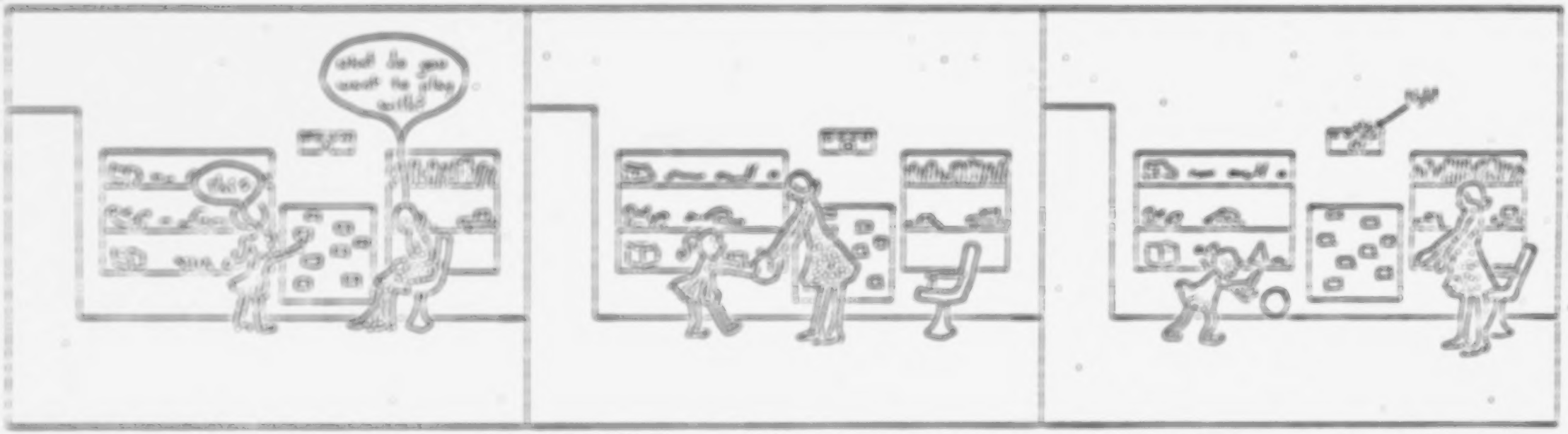
This signal system is also valuable when a separate ER area has been arranged. A method of controlling the noise level generated in the ER area of a single room setup is to play quiet background music. This serves to compete with and to mask the noise.

E. Preparation of a Task Area

The task area should be designated as that location where the students work on their tasks. Students in this area should not be allowed to talk among themselves and should not engage in external reinforcing events. The desks should be grouped so all students performing their tasks are in the same general area.

F. Organization of Materials

The teacher should organize instructional materials near the task area so they are easily accessible to the students. Materials should be organized by subject matter, i.e., multiplication, division, reading, history, etc. If the teacher is teaching only one subject, such as English, she would probably organize her materials by titles. Materials should also be organized by the diagnostic levels to which the teacher has assigned them.



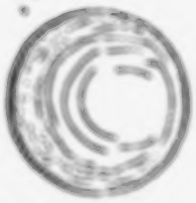
The child returns from back area, goes to menu and selects a toy or game.

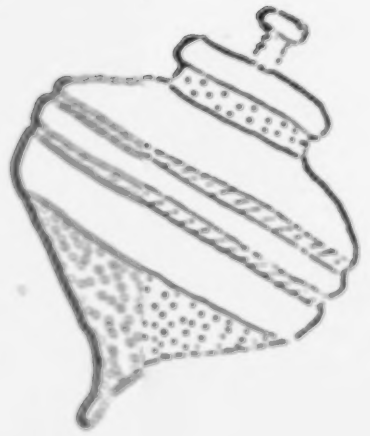
The RT manager gets the toy and gives it to the child.

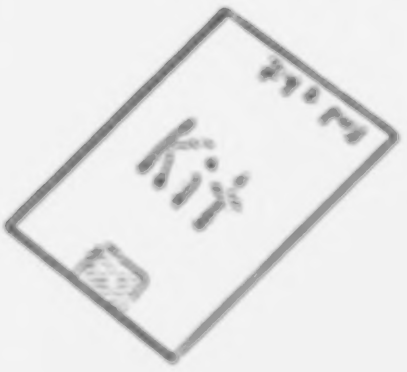
The child gets to play with the toy until his break time is up.

RS MENU

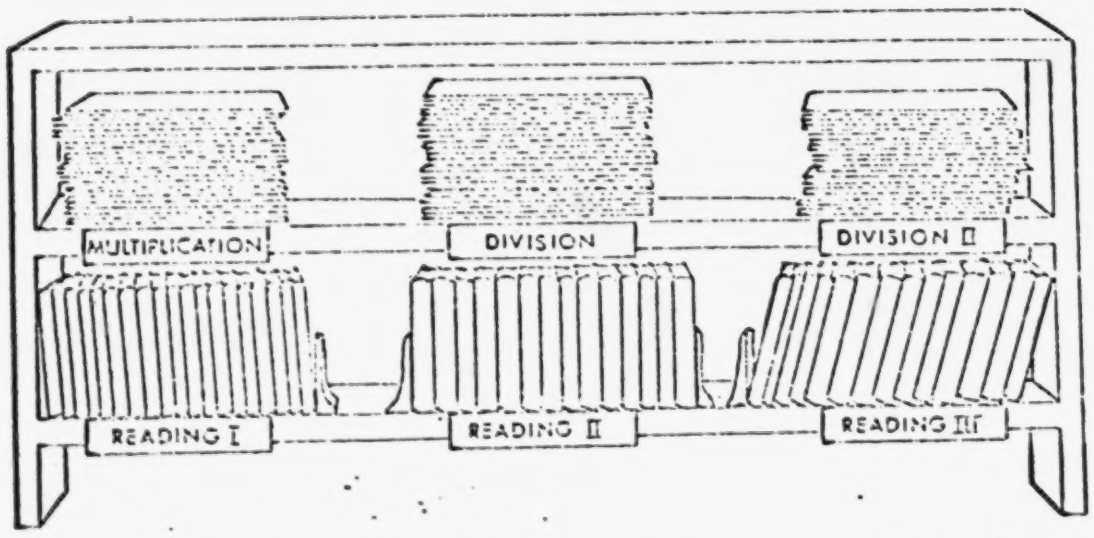
Ask the student to pick what he would like to do from this menu.







HOW TO ORGANIZE MATERIALS



To keep materials from becoming disorganized, it might be possible for the teacher to assign different students the job of reorganization. This in itself might be used as an RE.

IV.

MANAGEMENT OF THE CLASSROOM

A. Orientation of Students

On the first day of class, students should be oriented to the contingency managed classroom.

With older students the teacher may choose to explain first the relatively simple concept of "If you do X successfully, then you can have (do) Y." If the teacher feels it necessary, he should explain that doing X successfully involves a short test to determine if the student has learned the assigned information.

The students should understand the grading procedure which the teacher has chosen and the consequences of not passing the progress check, i.e., that the consequences may be an explanation by the teacher and retaking the progress check, doing the task again, or doing another task and passing its progress check before receiving an RE.

1. Orientation Methods

Two possible methods for orienting the students:

a. The teacher can choose a student to be used as an example to the class and take this student through the various stages of orientation. Having done this, the teacher can answer any questions and then let each of the students go through the process with individual assistance where needed.

b. Each student may be oriented individually.

2. Orientation Procedures

An orientation flowchart* has been developed using the concept of chaining. An example of chaining used as a training device is teaching a child to say "Washington" by saying "ton" first, the "ington,"

* See flowchart No. 4, page 44

and finally "Washington." The teacher should use the following steps in the orientation:

a. Show the student the REs and explain the length of time he may spend in the RE area and the system for signalling when that time is over. Allow him to engage in an RE for a short time (one minute) and have him leave the area on signal.

b. Explain the RE menu, have the student choose an RE, and let him again have the RE.

c. Explain that when the student has successfully completed a progress check, this is the signal to go to the menu. After this, the teacher should say something like "All right, you passed your progress check, and now you may go to the menu."

d. After the student has again completed steps c, b, and a, in that order, a task should be assigned. At this point, students who can read should be introduced to the student record sheet, the diagnostic profile, and the daily assignments. The teacher would probably prefer to assign tasks orally to pre-readers or non-readers.

After the student has engaged in a task, he should take a progress check. On passing, the student should go to the menu, choose an RE, and engage in the RE for a short period. Now he has completed the orientation cycle.

The teacher may object to having the students engage in many REs during orientation. However, the experience in the RE area of doing something they enjoy after successfully completing a task makes them more eager to complete tasks rapidly in the future.

B. Prescriptive Procedures

1. Administration of Prescriptive Test and Additional Information

In order to determine each student's achievement level, the teacher should administer the prescriptive test after student orientation has been completed.

The teacher can establish contracts with the students during the testing period. In this case, simply completing a section of the test would be a combination task-and-progress-check. After a student had completed a specified section, he would be permitted to have an RE.

In addition to the information which the teacher can get from the tests, it may be possible to talk to the student's previous teachers or to use a form (as shown below) which he could send to teachers from the previous year. Information of value to the teacher would include the student's attitudes toward school, his rate of progress through instructional materials, and his strengths and weaknesses in relevant subjects.

INFORMATION FORM

Student's Name _____ Evaluator's Name _____ Date: _____

	Excellent	Above Average	Average	Below Average	Poor
Attitudes towards school					
Conduct in the class					
Rate of progress through materials					
Areas of exceptional academic achievement (strengths)	1. 2. 3.				
Areas of academic weakness	1. 2. 3.				

2. Identification of Problem Areas

The student should be informed of the test results. After areas of required additional instruction have been determined, the teacher should also note areas in which the student excels, emphasizing these to the student.

Test items should be carefully examined by the teacher to determine a student's inconsistency between his test score and actual knowledge. A test score, for example, may indicate that the student is generally excelling in spelling but is consistently misspelling certain words. A few hours of concentrated study can remedy the deficiency and bring the student's skill up to the desired level.

Another example is specifically related to grade scores attained on the Stanford Achievement Test for first grade students. It is conceivable that a first grader could achieve an overall grade score of 2.6 on the mathematics section, indicating that he is excelling in first grade mathematics. However, close examination might indicate that he is having problems in dealing with concepts of weight and measurement. It is possible that after the student completed that instructional unit the teacher would find, after administering another prescriptive test, that the student was now responding on a level several months beyond the 2.6 first indicated.

If the diagnostic test shows the student strong in all parts of an area, he may be allowed to skip the instruction related to that area. If the student says he knows the material, this should be verified by the administration of appropriate progress checks. Any student who scores 90 percent correct or above may skip the material.

It is important to note that the student's areas of strength are probably (although not necessarily) the areas that he most enjoys working

in. The best method of determining if the student enjoys working in an area is by asking him and watching his behavior in class. Working on tasks related to strong areas may be used as REs for the student.

3. Recording Diagnostic Information

After the teacher carefully examines the prescriptive test and scores it, noting strengths and weaknesses, the results should be recorded on the student's record sheet which will be kept in each student's folder. The format for recording the results is shown on page 39. The teacher may choose to record the scores and list the areas of weakness and strength, or both.

The criteria for making this decision would depend on the prescriptive test itself. If the test covers one specific skill, recording the score would be sufficient, but a prescriptive test might deal with a subject area which involves addition, subtraction, word problems, weights, measurements, etc. In this case, it would probably be necessary to record the overall score for arithmetic plus the specific areas of strength and weakness. When a standardized profile sheet is provided, specific areas of strength and weakness should still be recorded. Each time the teacher gives the student a prescriptive test, the information should be recorded on the student's record sheet. Being able to note his progress is an important source of reinforcement for the student. The teacher may also want to have a record of the test scores, weaknesses, strengths, and other personal information about the student.

C. Specification of Assignments

1. Identification of Diagnostic Level

It is necessary for the teacher to determine the level on which each

student is responding regarding a subject area. This may be determined directly from the test scores themselves, but as previously mentioned, these scores often relate to gross subject areas.

The diagnostic level of the student may be determined more accurately by the teacher by examining the unit and daily tasks of the course, and deciding at what point they correlate with the test results.

2. Identification of Corresponding Task Materials

Having already determined what materials will be used and having correlated these materials with the units of study, the teacher will specify for each student the materials appropriate to the student's diagnostic level.

3. Preparation of Individual Task List

After having determined the student's diagnostic level and the corresponding instructional materials, the teacher should record the information on the student's record sheet. Information recorded should include identification and the size of the tasks the student is to work on. This will be called a task list. The size of the task may be a series of page numbers, or a specific chapter, or it may be "the first five sentences of the third paragraph on page 35." The tasks can be recorded by the teacher daily or by unit of instruction. Mature students possibly would be able to record their own daily tasks if the teacher has prepared a master plan of tasks necessary to complete a unit.

In addition to the results from the diagnostic test, the record sheet should include the daily assignments.

D. Establishing Daily Contracts

The essential elements of any contract are "If you do X, then you can have

(do) Y," but the contracting procedure is more complex than that. It is graphically presented on the Specification of Contracting flowchart.*

1. Setting Up the Contract Situation

   The first steps of motivation management consist of:

   a. specifying the task.

   b. identifying an appropriate reinforcer.

2. Establishment of the Contract

   The contract must be stated in simple, easily understood language. The terms of the contract should read, "If first you do X, then you may do (or will get) Y." The term "you" may refer to an individual student or a group of students. But, because of individual differences such as rate of progress through learning material, degree of motivation, and the kind of reward, it is easier and more desirable to establish individual contracts with students. This implies a need for the preparation of individual task assignments. The easiest method to prepare individual task assignments is the use of programed instruction, although programed instruction is not absolutely necessary. The important thing is to establish contracts with specifiable amounts of work for each student and to reinforce their successful completion by some appropriate reward. Exactly what rewards are used depends on the teacher's observation of the student. The RE can be entertaining or a preferred academic activity which reinforces a less preferred one. For example, it is possible to establish contracts like, "First, complete the next 10 arithmetic problems correctly, then you may read Moby Dick for 10 minutes." In this example, the teacher detected that reading Moby Dick was a reinforcing activity for that student at that time. If the student's preference is for arithmetic problems over reading Moby Dick, then the contingency would be reversed.

* See flowchart No. 6, page 46.

The contract would then be "Read 5 pages of Moby Dick and answer these questions, and then you may work on arithmetic for 10 minutes." The student is the best source of information on what is reinforcing to him at any one time.

In any case, it is crucial that:

a. the amount of work required be specified.

b. the amount of reinforcement be specified.

c. there be some clear indication of the beginning and end of tasks as well as reinforcements.

3. The Implicit Definition of the Contract

The contract is a non-preferred task (a task which the student does not enjoy doing and which may be one of the student's areas of weakness) followed by a progress check. The progress check is followed by an RE if the progress check is passed. If not, several alternatives are open as shown on the Specification of Contracting flowchart.* The student should not be forced to go over and over a task without any sort of break. If the student is making an effort without successfully completing his assignment, the teacher should administer a progress check that the student is able to pass and send him to the RE area. (This is because going to the RE area must always be contingent on some performance demonstrated by the student.) In such an event, it is likely that the diagnosis and the resulting task assignments should be re-examined and possibly altered.

4. Introduction of Preferred Tasks

After the system has been in effect long enough for the students to become accustomed to its concepts, it may be possible for the teacher to arrange for the students to engage in tasks which they enjoy doing as REs. For example, a student may thoroughly enjoy doing tasks

* See flowchart No. 6, page 46.

which involve reading but may intensely dislike doing his fractions. In this case, the teacher would first have the student do his fractions and then a task related to reading. This reinforcing task would be followed by a progress check just as are nonpreferred tasks. If the student passes this progress check, he would then engage in another less-preferred task.

The teacher must remember to reinforce the student from time to time for successful completion of a preferred task, orally or by allowing him to progress to the RE menu.

E. Self-Contracting

Every conscientious teacher wants to do more than teach arithmetic, composition, geography, or whatever his subject matter is. He also wants to teach self-control, initiative, and self-discipline.

But there are no academic courses which equip an instructor to teach the behavior characteristics that these terms describe. Contingency contracting in which the student is his own contractor -- a process which is called self-contracting -- offers a concrete way to teach an approximation to the general field of self-management, and it offers a great opportunity for the experimentally minded teacher to try out various techniques of his own. Several important points are evident in pioneering efforts* at teaching self-contracting. At first, some agent other than the student determines

* Approximations to self-contracting are used in a Job Corps Center run by Westinghouse Learning Corp. (Chadwick, Clifton; Hall, Scott, and Burns, John, "Contingency Management in a Job Corps Setting"; unpublished manuscript, 1967). In the Job Corps Center at the beginning of a typical class period, the student goes to a previously designated task card file, removes a task card, and an RE card, then selects another task card, and so on, until he has his day's contract. The RE card permits the student to roll two dice which determine the length of time his reinforcement will be. (Reinforcing time is twice the value in minutes of the number the student rolls. If he rolls a seven, for example, he gets 14 minutes in the RE area.) Though the student is given all of his contracts for a whole school period, he is advised to take his RE time after the completion of each contract.

both the task requirement and the length of reinforcement time. An analysis of the ways in which the contingency contracting system may lead to self-management through the successive approximation technique. Positive contingency contracts may be of three basic types, depending on whether the terms of the contract are determined by a manager, the student, or by both of them.

The forms of contracting discussed so far are manager-controlled contracts. In these contracts, the amount of the task event required and the RI offered are determined by a manager, who may be a parent, a teacher, or someone else in a position to dispense reinforcements. In student-controlled contracts both the amount of task and amount of reinforcement are determined by the student. The aim of the contingency contracting system is to lead the student from the manager-controlled contracting method to the student-controlled contracting method. This may be accomplished by a technique through

ಕಲಿಸುವುದು ಉದ್ದೇಶ. ನಿರ್ದಿಷ್ಟ ಆಕಸ್ಮಿಕ ಒಪ್ಪಂದಗಳಲ್ಲಿ ಮೂರು ಮೂಲ ವಿಧಗಳಿವೆ, ಒಪ್ಪಂದದ ನಿಯಮಗಳನ್ನು ನಿರ್ಧರಿಸುವವರು ಯಾರು ಎಂಬುದನ್ನು ಅವಲಂಬಿಸಿ ಅವು ಬದಲಾಗುತ್ತವೆ.

ಇಲ್ಲಿಯವರೆಗೆ ಚರ್ಚಿಸಿದ ಒಪ್ಪಂದದ ರೂಪಗಳು ವ್ಯವಸ್ಥಾಪಕ-ನಿಯಂತ್ರಿತ ಒಪ್ಪಂದಗಳಾಗಿವೆ. ಈ ಒಪ್ಪಂದಗಳಲ್ಲಿ, ಮಾಡಬೇಕಾದ ಕಾರ್ಯದ ಪ್ರಮಾಣ ಮತ್ತು ನೀಡಲಾಗುವ ಪುನರ್ಬಲನಗಳನ್ನು ವ್ಯವಸ್ಥಾಪಕರು ನಿರ್ಧರಿಸುತ್ತಾರೆ, ಅವರು ಪೋಷಕರು, ಶಿಕ್ಷಕರು, ಅಥವಾ ಇನ್ನಾವುದೇ ರೀತಿಯ ಸ್ಥಾನದಲ್ಲಿರುವ ವ್ಯಕ್ತಿಯಾಗಿರಬಹುದು. ವಿದ್ಯಾರ್ಥಿ-ನಿಯಂತ್ರಿತ ಒಪ್ಪಂದಗಳಲ್ಲಿ ಕಾರ್ಯದ ಪ್ರಮಾಣ ಮತ್ತು ಪುನರ್ಬಲನದ ಪ್ರಮಾಣ ಎರಡನ್ನೂ ವಿದ್ಯಾರ್ಥಿಯೇ ನಿರ್ಧರಿಸುತ್ತಾನೆ. ಆಕಸ್ಮಿಕ ಒಪ್ಪಂದ ವ್ಯವಸ್ಥೆಯ ಗುರಿಯು ವಿದ್ಯಾರ್ಥಿಯನ್ನು ವ್ಯವಸ್ಥಾಪಕ-ನಿಯಂತ್ರಿತ ಒಪ್ಪಂದ ವಿಧಾನದಿಂದ ವಿದ್ಯಾರ್ಥಿ-ನಿಯಂತ್ರಿತ ಒಪ್ಪಂದ ವಿಧಾನಕ್ಕೆ ಕೊಂಡೊಯ್ಯುವುದಾಗಿದೆ. ಇದನ್ನು ಸಾಧಿಸಲು ಒಂದು ತಂತ್ರವು ಹೀಗಿದೆ:

೩. ವ್ಯವಸ್ಥಾಪಕ-ನಿಯಂತ್ರಿತ, ವಿದ್ಯಾರ್ಥಿ-ನಿಯಂತ್ರಿತ, ಮತ್ತು ಸಿದ್ಧಾಂತಿಕವಾದ ನಿಯಂತ್ರಣದ ನಡುವೆ ಯಾವ ರೀತಿಯ ಆಯ್ಕೆಯನ್ನು ಮಾಡಲಾಗುತ್ತದೆ ಎಂಬುದನ್ನು ಅವಲಂಬಿಸಿ ಅವು ಬದಲಾಗುತ್ತವೆ.

ಅ. ಹೆಜ್ಜೆ ೫: ವ್ಯವಸ್ಥಾಪಕ-ನಿಯಂತ್ರಿತ ಒಪ್ಪಂದಗಳನ್ನು

ಈ ಕೆಳಗಿನ ವ್ಯವಸ್ಥಾಪಕ-ನಿಯಂತ್ರಿತ ಒಪ್ಪಂದ ವ್ಯವಸ್ಥೆಯಲ್ಲಿ, ಈ ಪ್ರಮಾಣಗಳನ್ನು ಅನುಸರಿಸಲಾಗುತ್ತದೆ:

(೩) Step ೫. ಮೊದಲಿಗೆ ಕೆಲಸ-ಪ್ರಮಾಣದ ಮೇಲೆ ಒಪ್ಪಂದ ಮಾಡಿಕೊಳ್ಳಲಾಗುತ್ತದೆ.

(೪) Step ೪. ಮೊದಲಿಗೆ ಪುನರ್ಬಲನದ ಮೇಲೆ ಒಪ್ಪಂದ ಮಾಡಿಕೊಳ್ಳಲಾಗುತ್ತದೆ.

(3) Step 3. The manager presents this contract to the student.

(4) Step 4. The student accepts the contract and performs the task.

(5) Step 5. The manager delivers the reward.

In student-controlled contracting, the procedure is similar to the one described above, but the student replaces the manager. The student determines the amount of the reinforcement and the amount of the task, agrees to his own contract, performs the task, and delivers the reinforcement to himself.

In transitional contracts, both the manager and the student are involved in determining the terms of the contract.

b. Level 2: first transitional step -- partial control by the student.

The first transitional step follows manager-controlled contracts.

(a) The student assumes joint control with the manager over the amount of reinforcement to be given while the manager retains full control of the amount of task.

(b) The student assumes joint control with the manager over the amount of task while the manager retains full control of the amount of reinforcement.

Whichever of the two forms follows Level 1, the other form must also be practiced before going on to Level 3.

The Level 2 procedural steps appear outlined as follows:

R = Reinforcement
T = Task
M = Manager
S = Student
MS = Manager-Student

c. Level 3: second transitional step -- equal control by manager and student.

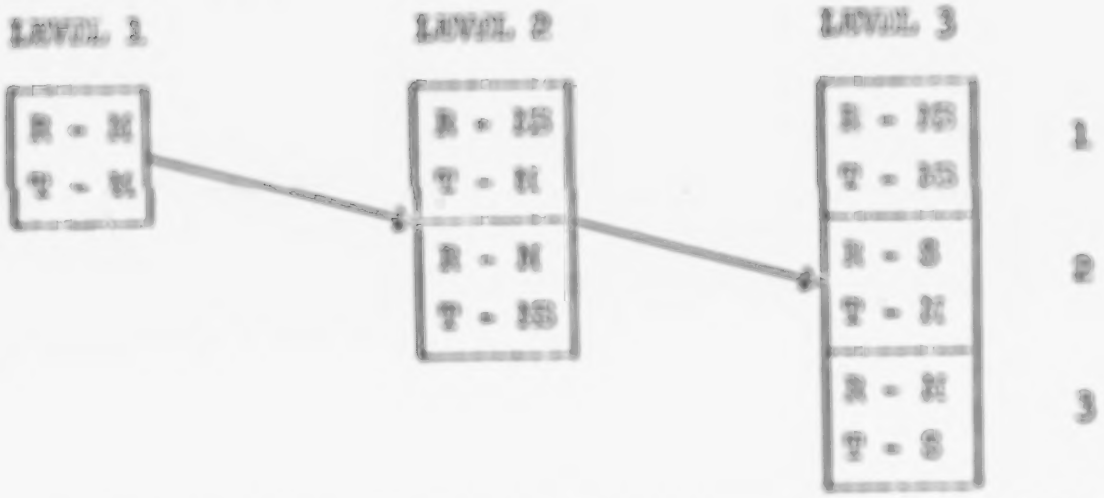
The next transitional step requires three forms of contracting.

(1) The student and the manager share joint determination of both the amount of reinforcement and the amount of task.

(2) The student assumes responsibility for the amount of reinforcement while the manager retains control of the amount of task.

(3) The manager controls the amount of reinforcement while the student assumes control of the amount of his task.

The procedural steps are:



Again, it is important that the student practice all three forms of level 3 contracting before going on to level 4.

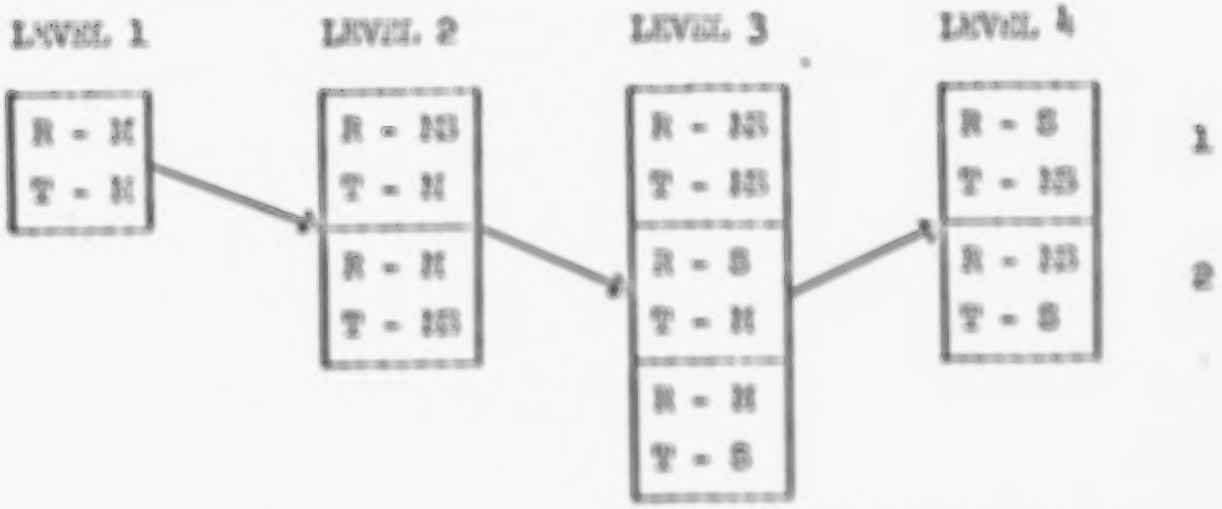
d. Level 4: third transitional step -- partial control by the manager.

The student now becomes involved in the determination of the reinforcement and the task.

(1) The student has full control over the amount of reinforcement and shares joint control with the manager over the amount of task.

(2) The student shares joint control with the manager over the amount of the reinforcement while assuming full control of the amount of task.

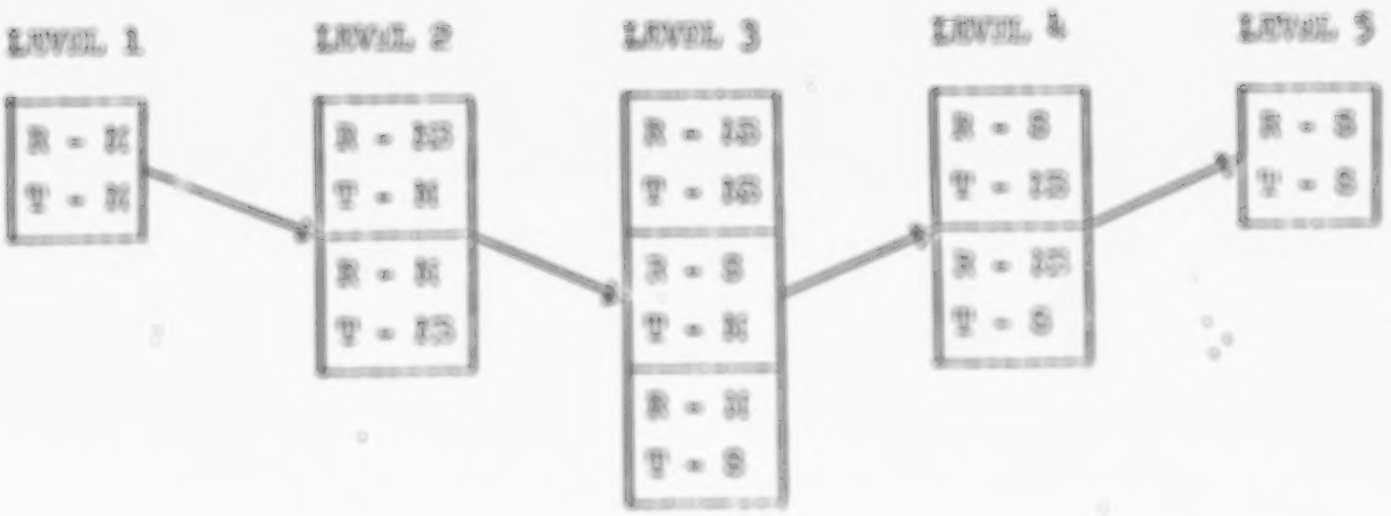
This transition further expands as follows:



The student must practice both forms of Level 4 contracting before going on to level 5.

e. Level 5: student-controlled contracting

After completing level 4, the student takes over complete control.



9. Implementation of the Transition

The making and fulfilling of contracts may be considered as major or macro-tasks in larger macro-contracts which are prepared to reward contracting as a behavior. The macro-contract might say, "If you make and complete 20 small contracts, you will earn a ticket to the movies." The small contracts constituting tasks under macro-contracts are called micro-contracts. When a student accepts and fulfills micro-contracts, he is performing tasks. These tasks can be contracted according to the principles of contingency contracting. What has been said so far about contracting will generally hold true for both micro-contracts and macro-contracts, but in macro-contracts the task events are always micro-contracts.

It is possible that some students, after a few illustrative examples, will be able to start making micro-contracts at levels higher than level 1. Some of them may even be able to make self-controlled (level 5) contracts. The making of such micro-contracts should be reinforced by using the principles of contracting defined in this course.

If the student's motivation is to continue under conditions outside of the relationship established between himself and the contingency manager, it is necessary for him to learn how to establish himself as his own contingency manager. To shift from management-by-contracts to self-management, macro-contracts must be used. Control of the specification of the macro-tasks will have to be shifted from manager-control to student-control, and the student will have to be able to reinforce himself under such macro-contracts.

The ultimate goal of contingency contracting can then be redefined as getting the student ready to both establish and fulfill his own contracts and to reinforce himself under macro-contracts for doing so. Having had such practice in self-determination, the student is capable of making his own contracts, determining his own tasks, and determining his own reinforcements. At this stage, it is expected that the individual can maintain motivational independence by using contingency management as a procedure for systematic self-management.

V.

CORRECTING CONTRACT MALFUNCTIONS

A. Recognizing Malfunctions

A student fails in the classroom because the motivational system fails. The teacher should note how each student is responding to the contingency contracting system. When one or more of the following symptoms are observed, the contract should be revised:

1. Unfinished assignments
2. Complaining
3. Excessive dawdling
4. Talking and wasting time
5. Looking at the clock excessively
6. Inattention to instructions or details
7. Failure to pass more than two progress checks in a specific subject area.

Students exhibiting any of the above-listed behaviors probably require special attention.

B. Method of Remedying Malfunctions: Revising the Contract

The contract can be revised by lengthening or shortening it.

1. Lengthening the Contract

When the student finishes all of his tasks before the expected time, the contract is probably too short. The student should receive the full benefit of the extra free time as a reinforcement for finishing his contract, but on the next day the contract may be lengthened by adding more tasks and REs. The student should be made to feel that this is reinforcing and that he has achieved a new status.

2. Shortening the Contract

When the student consistently fails to finish his contract in the allotted time, the contract should be shortened. Tasks should be gradually and systematically deleted from each of the subject areas. If this system is not successful, the teacher is probably not using the REs most appealing to that particular student. The situation then should be re-examined, and REs should be introduced which will motivate the student to finish his contract in the allotted time.

VI.

CONCLUSION

Two essential components of any educational system are instruction and motivation. In the past few years the technology of instruction has been developed so that it is not only possible for teachers to define educational objectives in precise behavior terms, but it is also possible to obtain self-instructional materials in many subject areas which are based on and correspond to well-defined objectives.

Motivation technology in the form of contingency management has been the primary concern of this manual. More specifically, this manual has dealt with the ways in which a teacher can apply modern motivation management techniques to improve the student's chances of succeeding in any subject area. Such improvements are especially significant in those areas where the student's motivation is relatively low because of lack of adequate preparation, a history of failure to obtain reinforcing consequences for his effort, or a failure on the part of previous teachers to use adequate motivation to facilitate academic performance and learning.

The techniques presented in this course may be summarized as follow:

1. The objectives of all educational activities must be clearly defined, specifying what the student should be able to do upon completion of a particular course or unit of instruction.
2. The materials corresponding to these objectives, whether they are in the form of texts, workbooks, lectures, experiments, etc., must also be clearly specified.
3. Diagnostic tests must be either obtained or prepared to measure the knowledge of the student at the time he is starting the program (prescriptive tests) as well as at the end of each bit of academic performance (progress checks).
4. RMs for each individual student must be assessed and made available as rewards for successful performance.

Once all of the above steps have been established and areas in which the student shows specific weaknesses have been determined, instructional materials must be secured, assigned, and contracted.

RE menus, task and RE sheets, diagnostic tests, and student task lists are all tools designed to facilitate the teacher's role as a motivation manager in the classroom. Equipped with these tools and with others like programed

instruction courses, audio-visual aids, automated teaching machines, today's teacher is ready to convert yesterday's mass education of the individual student into tomorrow's individualized education.

The purpose of this manual is to help the teacher accomplish this task.

APPENDIX

STUDENT RECORD SHEET

Student's Name _____

Week of: _____

DIAGNOSTIC PROFILE. Name of Test: _____

Test Scores:	Specified Weaknesses:	Specified Strengths:
1.	1.	1.
2.	2.	2.
3.	3.	3.
4.	4.	4.
5.	5.	5.
Etc.	Etc.	Etc.

	Name of Task:	Materials:	Specified Amount:
Day 2	1. Adding Fractions	1. Trouble Shooting Mathematics Skills	1. P. 20, problems 1-6
	2. Comprehension	2. Reading for Understanding	2. P. 8, whole story
	3. Spelling "ie" Words	3. Assigned List of Words	3. 20 words

	Name of Task:	Materials:	Specified Amount:
Day 3	1. Adding Fractions	1. Trouble Shooting Mathematics Skills	1. P. 21, problems 1-6
	2. Comprehension	2. Reading for Understanding	2. P. 8, whole story
	3. Spelling "ie" words	3. Assigned List of Words	3. 20 words

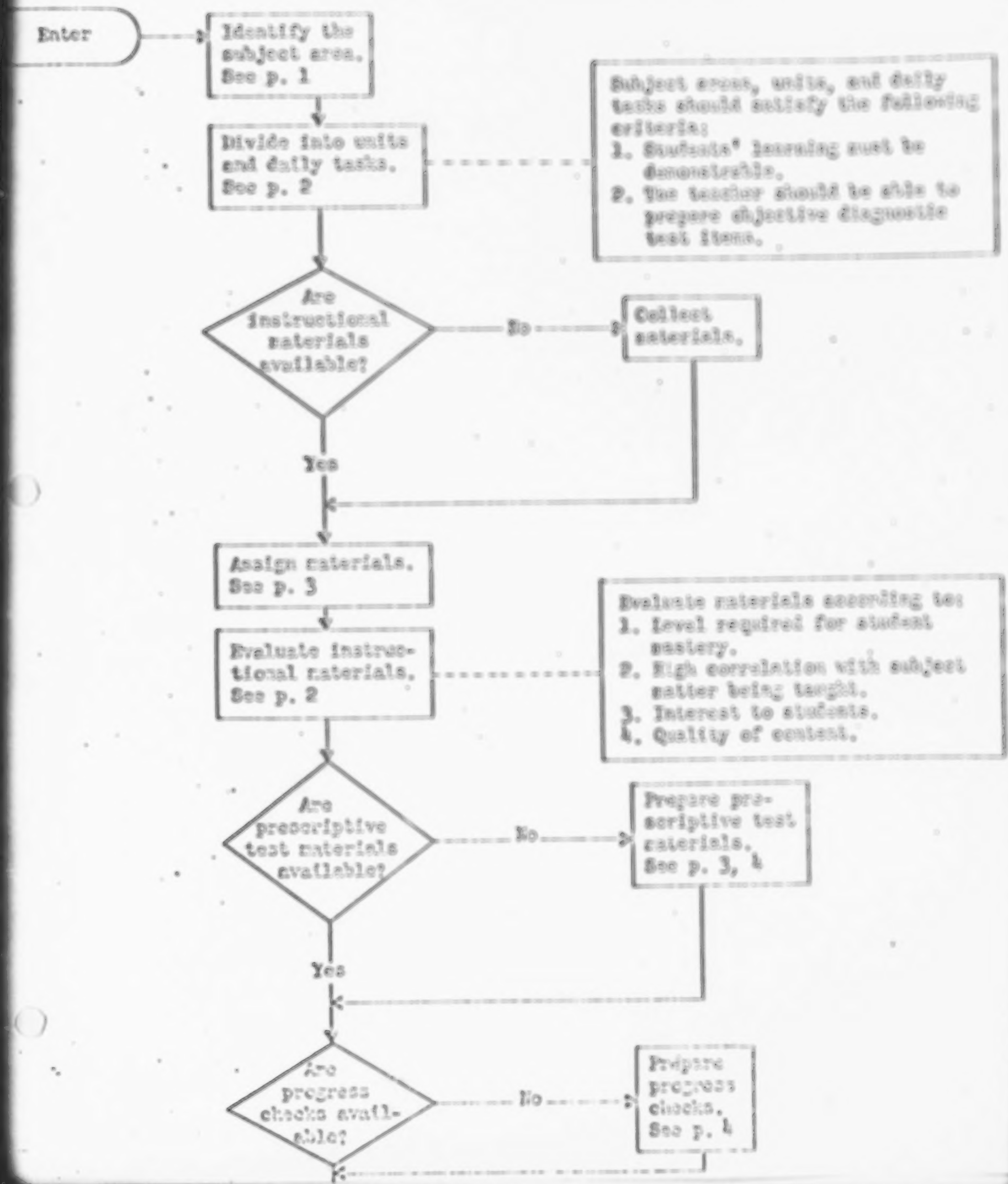
	Name of Task	Name of Task:	Name of Task:
Day 4	1. Adding Fractions	1. Trouble Shooting Mathematics Skills	1. P. 22, problems 1-6
	2. Comprehension	2. Reading for Understanding	2. P. 11, whole story
	3. Unit Test on "ie" Spelling Words	3. Unit Test	3. 20 words

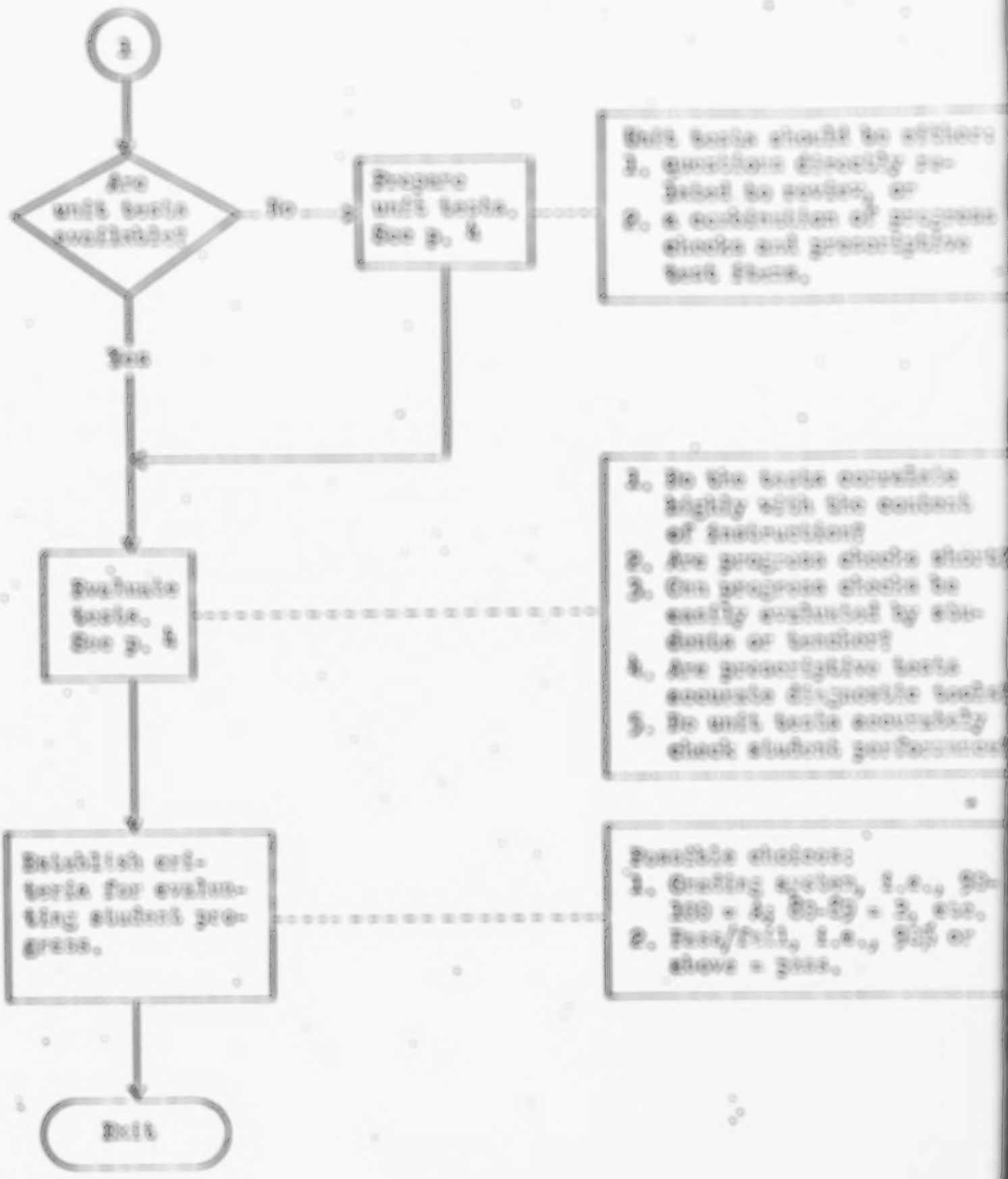
	Name of Task:	Materials:	Specified Amount:
Day 5	1. Unit Test on Adding Fractions	1. See Teacher for Test	1. 8 problems
	2. Comprehension	2. Reading for Understanding	2. P. 14, whole story
	3. Vocabulary - Define and Use in a Sentence	3. Vocabulary Cards	3. 10 cards

ETC.

FLOWCHART NO. 1

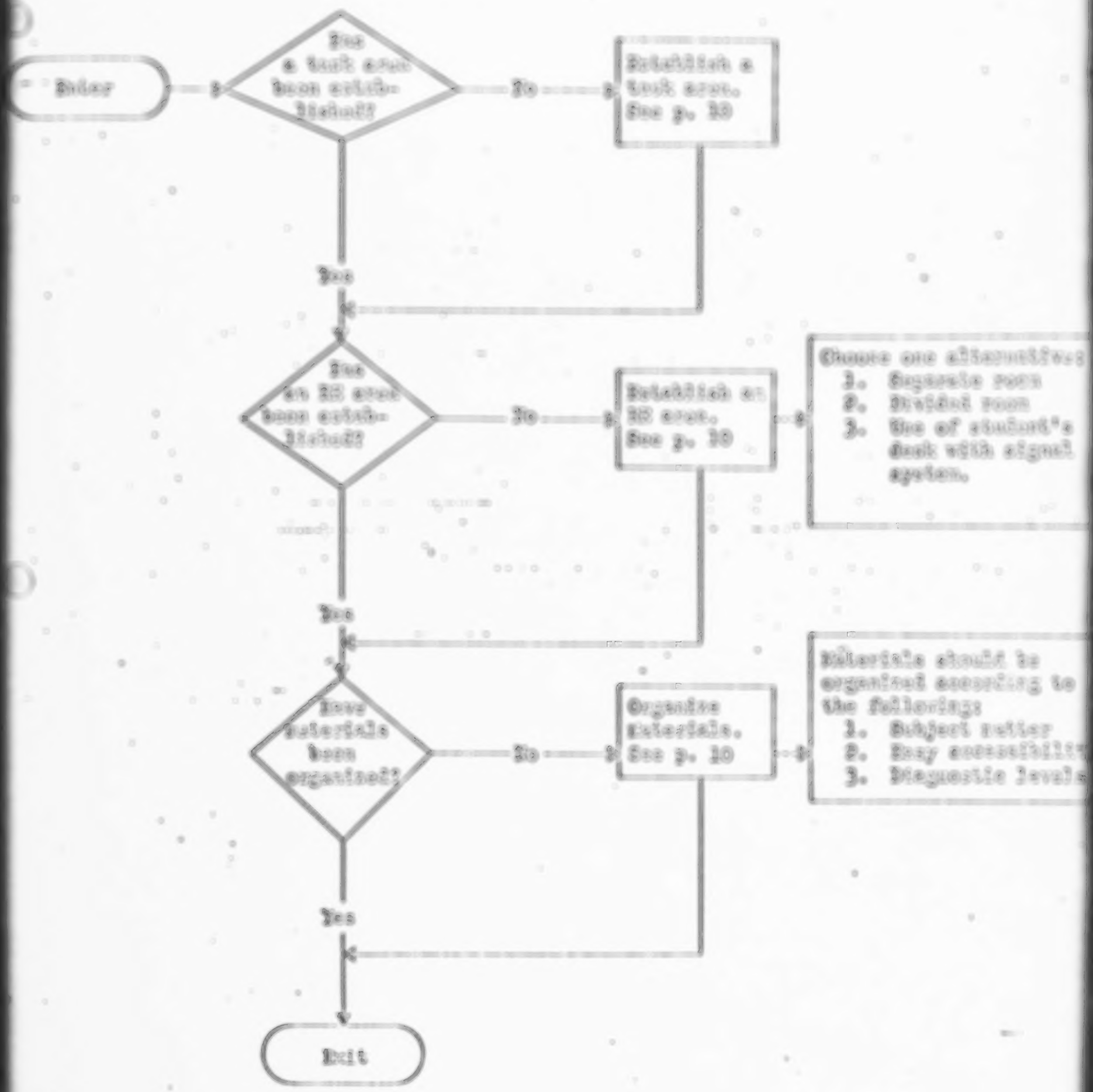
Task, Material, and Diagnostic Test Specification


Enter
Identify the subject area. See p. 1
Divide into units and daily tasks. See p. 2
Subject areas, units, and daily tasks should satisfy the following criteria:
1. Students' learning must be demonstrable.
2. The teacher should be able to prepare objective diagnostic test items.
Are instructional materials available?
No
Collect materials.
Yes
Assign materials. See p. 3
Evaluate instructional materials. See p. 2
Evaluate materials according to:
1. Level required for student mastery.
2. High correlation with subject matter being taught.
3. Interest to students.
4. Quality of content.
Are prescriptive test materials available?
No
Prepare prescriptive test materials. See p. 3, 4
Yes
Are progress checks available?
No
Prepare progress checks. See p. 4


Are unit tests available?
No
Prepare unit tests. See p. 4
Unit tests should be written
1. manually or directly by hand, or
2. a combination of programs which are generated as unit tests.
Yes
Evaluate tests. See p. 4
1. Do the tests correspond highly with the content of instruction?
2. Are programs which should
3. Can programs which do exactly correspond to which do or tendency?
4. Are generalized tests adequate to evaluate
5. Do unit tests adequately check student
Establish criteria for evaluating student progress.
Possible choices:
1. Grading system, i.e., 90-100 = A, 80-89 = B, etc.
2. Pass/fail, i.e., 70% or above = pass.
Exit

Begin
Choose method of selecting records
See p. 3
Choose one of these methods:
1. Available in the school.
2. "Quick or easy."
3. Suggested level of students.
Write an IEP
Goals
See p. 8
Choose method of determining AU time
See p. 4, 9
Choose one of these methods:
1. Pre-specified amount of time.
2. Amount of time based on level of ecology.
3. Amount of time based on difficulty of task.
Establish method of controlling AU time
See p. 9
Choose one (or more) of these methods:
1. Peer pressure.
2. Time charts.
3. "Sign-in/out sheets"
4. Students leave AU area every time minute 3 and hits a five minute indicator.
Exit

Specification of Classroom Layout



Enter

Student engages in WM for a specified time. See p. 14-15

Has student used WM ?

No → Student uses WM. See p. 25

Yes

Has student used signal for WM ?

No → Give signal to use WM. See p. 25

Yes

Has student made progress ?

No → Make specific action. See p. 25

Yes

Give progress check. See p. 25

Give task (action and or action). See p. 25

Give student signal to go to task area. See p. 25

Has time to be assigned ?

Yes

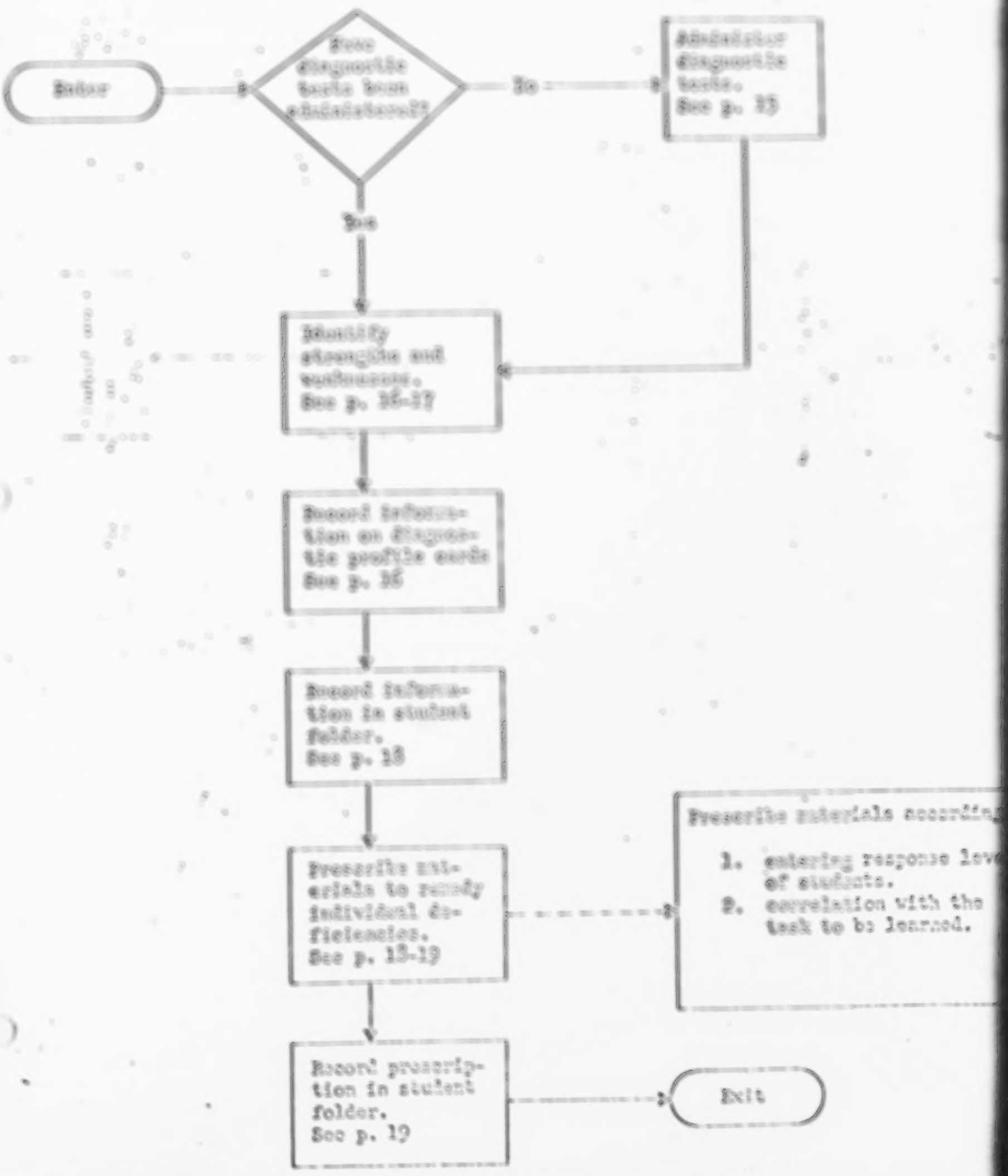
No

Call it a day

FLOWCHART NO. 4
Orientation to Contingency
Managed Classroom

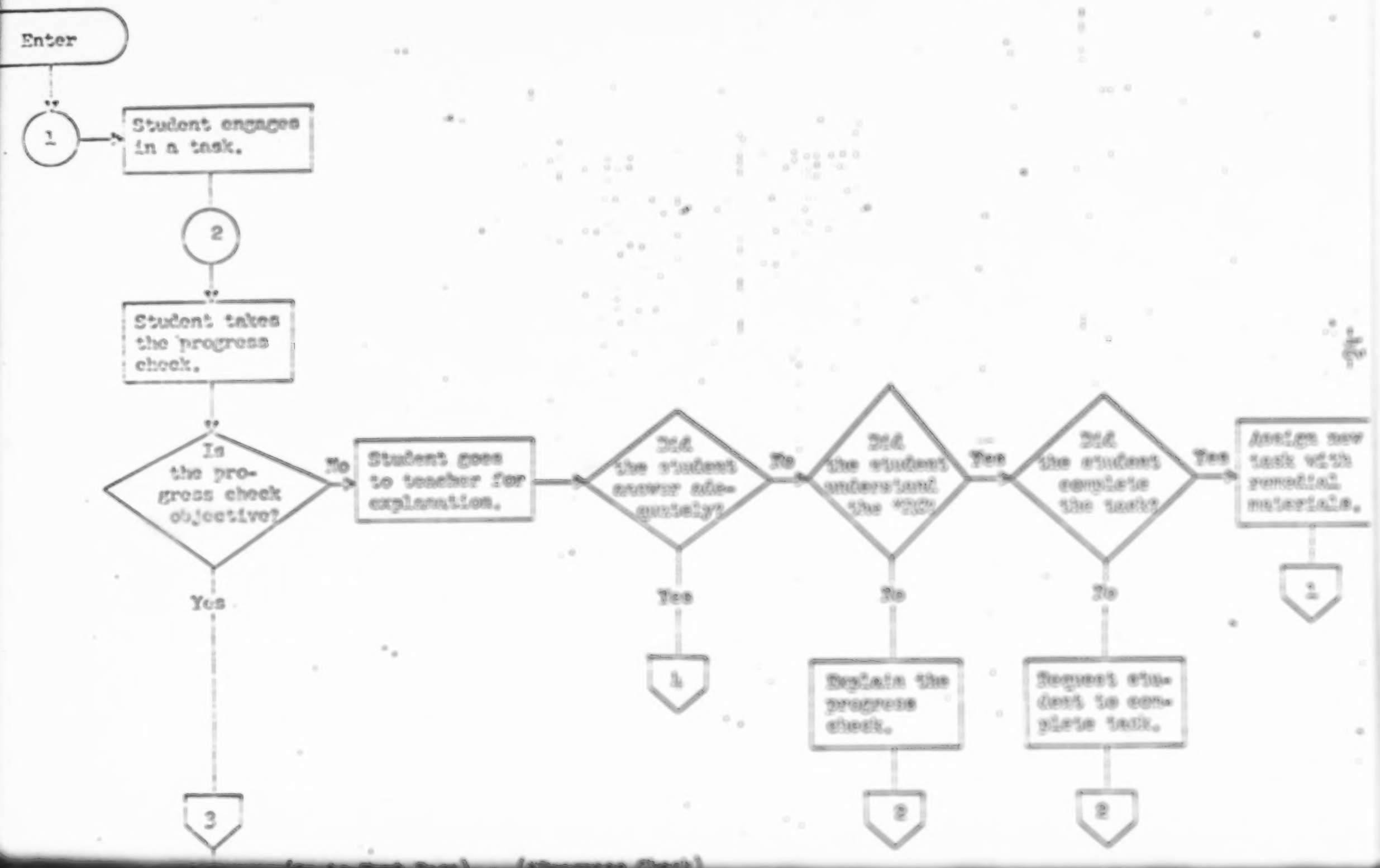
DIAGNOSIS No. 3

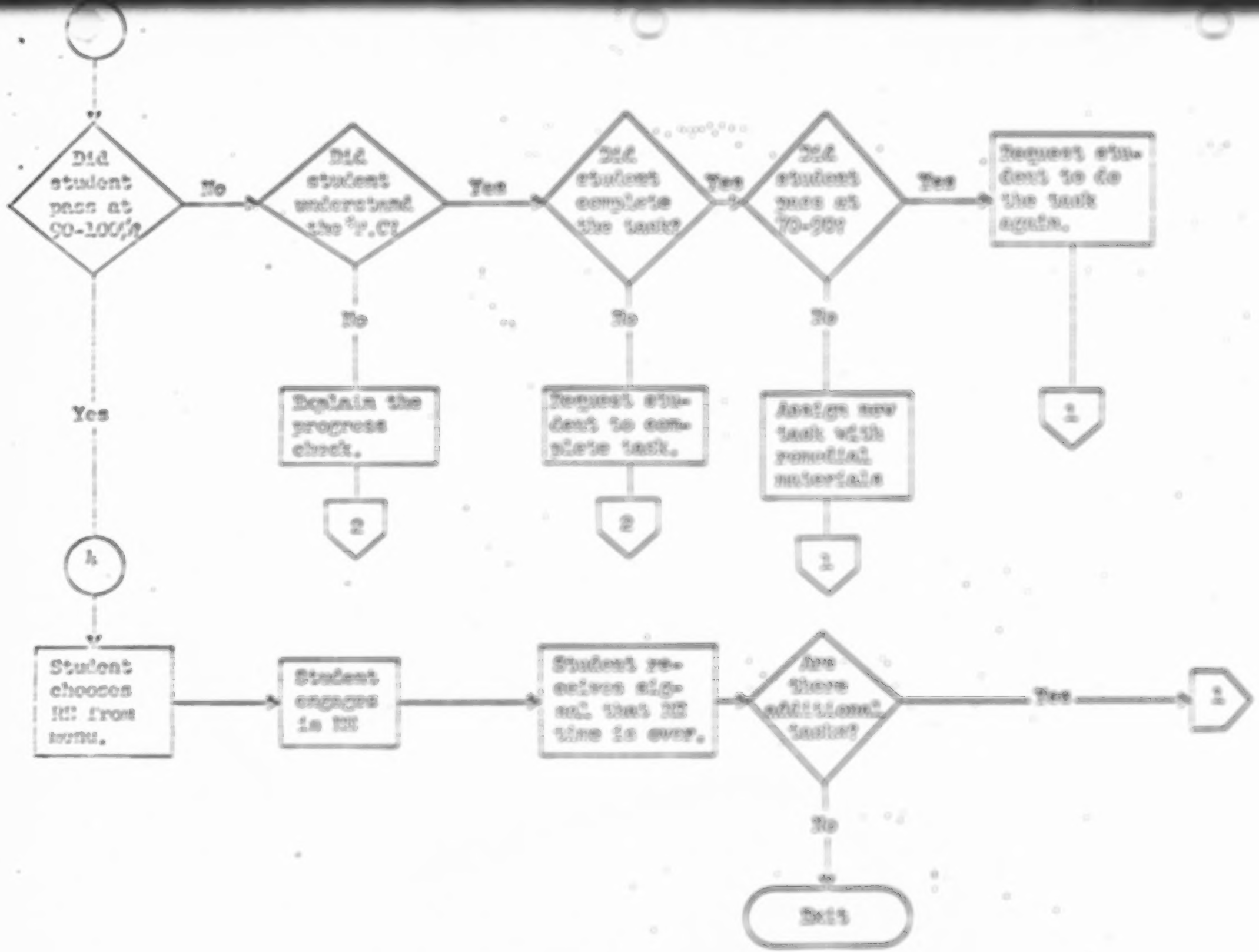
Diagnostics and Prescriptions



FLOWCHART NO. 6

Specification of Instruction




Did student pass at 90-100%
No
Did student understand the P.C
Yes
Did student complete the task
Yes
Did student pass at 70-80%
Yes
Request student to do the task again.
No
Explain the progress check.
No
Request student to complete task.
No
Assign new task with remedial materials
Yes
Student chooses it from menu.
Student engages in it
Student receives 5% mark at the end of time is over.
Are there additional tasks?
Yes
No
Exit
(* Progress Check)